Title (en)

OXYGEN SENSOR

Title (de)

SAUERSTOFFSENSOR

Title (fr)

CAPTEUR D'OXYGENE

Publication

EP 1019710 A2 20000719 (DE)

Application

EP 98959706 A 19981005

Priority

- DE 9802937 W 19981005
- DE 19744316 A 19971008

Abstract (en)

[origin: DE19744316A1] An oxygen sensor, based on a doped strontium titanate of formula (1a), (1b), (2a) or (2b), is new.- DETAILED DESCRIPTION - An oxygen sensor, based on a complex metal oxide of formula (1a), (1b), (2a) or (2b), is new: N = one or more of Ba, Ca, Mg, Zn, Cd, Hg and Pb; M = one or more of lanthanides, Y, In and Tl; M' = one or more of P, V, As, Nb, Sb, Ta, Mo and W; M = one or more of Al, Sc, Ga, Cr, Mn, Co and Ni; M' = one or more of Li, Na, K, Rb, Cs, Cu and Ag; n = 0 to 1; a = greater than 0 and not greater than 0.5; b = greater than 0 and not greater than 0.5; c = greater than 0 and not greater than 0.5; d = greater than 0 and not greater than 0.5; z = 0.1 to 0.6; and delta = the oxygen deficit.- (Sr1-nNn)1-aMaTi1-zFezO3- delta (1a); (Sr1-nNn)(Ti1-zFez)1-bM'bO3- delta (1b); (Sr1-nNn)(Ti1-zFez)1-cM''cO3- delta (2a); (Sr1-nNn)1-dM'''dTi1-zFezO3- delta (2b).- An INDEPENDENT CLAIM is also included for production of the above oxygen sensor by mixing the appropriate metal oxides, carbonates and / or oxycarbonates in the stoichiometric ratio, grinding in an organic solvent, drying, firing, forming a paste from the resulting metal oxide powder, applying and firing the paste on a preferably insulating substrate, and applying resistance-measuring electrodes before or after paste firing.TF - TECHNOLOGY FOCUS - ELECTRONICS - The sensor composition may consist of a mixture of two or more of the above materials (1a, 1b, 2a, 2b) in any ratio. The Ti may be replaced completely or partially (preferably less than 50, especially less than 20%) by Si, Ge, Zr, Sn, Ce or Hf

IPC 1-7

G01N 27/00

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G01N 27/00 (2006.01); **G01N 27/12** (2006.01)

CPC (source: EP US)

G01N 27/12 (2013.01 - EP US); Y10T 436/208339 (2015.01 - EP US); Y10T 436/209163 (2015.01 - EP US)

Citation (search report)

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DOCDB simple family (publication)

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